In the Claims:

Cancel Claims 1-36 and add new claims 37-67 as shown below.

37. A bispecific antibody comprising:

a) a first antibody binding specificity which confers the ability of the bispecific antibody to cross the blood-brain barrier; and

b) a second antibody specificity conferring the ability of the bispecific antibody to bind to a β-amyloid epitope.

38. The bispecific antibody of Claim 37 which is produced by fusing a first and a second hybridoma clone, the first hybridoma clone generating the specificity of step a) and the second hybridoma clone generating the specificity of step b).

39. The bispecific antibody of Claim 37 which is produced by recombinant DNA techniques.

40. The bispecific antibody of Claim 37 wherein the first and second antibody binding specificities are provided by chemically linking a first antibody, or fragment thereof, to a second antibody, or fragment thereof.

41. The bispecific antibody of Claim 40 wherein the first and second antibodies are monoclonal antibodies.

42. The bispecific antibody of Claim 40 which is an $F(ab')_2$ hybrid.

43. The bispecific antibody of Claim 39 which is a single chain Fv heterobispecific dimer.

44. The bispecific antibody of Claim 37 wherein the second antibody specificity further confers the ability of the bispecific antibody to inhibit the formation of β-amyloid plaques.

A1 CONT.

45. The bispecific antibody of Claim 37 wherein the second antibody specificity further confers the ability of the bispecific antibody to disaggregate preformed β-amyloid plaques.

46. The bispecific antibody of Claim 37 wherein the second antibody specificity is further characterized by the ability to hydrolytically cleave β-amyloid.

47. A method for inhibiting the formation of β-amyloid plaques in the brain of a human, the method comprising:

a) providing a bispecific antibody comprising:

i) a first antibody binding specificity which confers the ability of the bispecific antibody to cross the blood-brain barrier; and

ii) a second antibody specificity conferring the ability of the bispecific antibody to bind to a β-amyloid epitope; and

b) introducing the bispecific antibody of step a) into the circulatory system of the human at a concentration sufficient to result in transcytosis of the bispecific antibody across the blood brain barrier.

48. The method of Claim 47 wherein the bispecific antibody is produced by fusing a first and a second hybridoma clone, the first hybridoma clone generating the specificity of step a) i) and the second hybridoma clone generating the specificity of step a) ii).

49. The method of Claim 47 wherein the bispecific antibody is produced by recombinant DNA techniques.

A1 cont.

50. The method of Claim 47 wherein the first and second antibody binding specificities are provided by chemically linking a first antibody, or fragment thereof, to a second antibody, or fragment thereof.

51. The method of Claim 50 wherein the first and second antibodies are monoclonal antibodies.

52. The method of Claim 50 wherein the bispecific antibody is an $F(ab')_2$ hybrid.

53. The method of Claim 49 wherein the bispecific antibody is a single chain Fv heterobispecific dimer.

54. A method promoting the disaggregation of a preformed β-amyloid plaque in the brain of a human, the method comprising:

a) providing a bispecific antibody comprising:

i) a first antibody binding specificity which confers the ability of the bispecific antibody to cross the blood-brain barrier; and

ii) a second antibody specificity conferring the ability of the bispecific antibody to bind to a β-amyloid epitope in a preformed β-amyloid plaque thereby promoting the disaggregation of the plaque; and

b) introducing the bispecific antibody of step a) into the circulatory system of the human at a concentration sufficient to result in transcytosis of the bispecific antibody across the blood brain barrier.

55. The method of Claim 54 wherein the bispecific antibody is produced by fusing a first and a second hybridoma clone, the first hybridoma clone generating the specificity of step a) i) and the second hybridoma clone generating the specificity of step a) ii).

A1 cont.

56. The method of Claim 54 wherein the bispecific antibody is produced by recombinant DNA techniques.

57. The method of Claim 54 wherein the first and second antibody binding specificities are provided by chemically linking a first antibody, or fragment thereof, to a second antibody, or fragment thereof.

58. The method of Claim 57 wherein the first and second antibodies are monoclonal antibodies.

59. The method of Claim 57 wherein the bispecific antibody is an $F(ab')_2$ hybrid.

60. The method of Claim 56 wherein the bispecific antibody is a single chain Fv heterobispecific dimer.

61. A method inhibiting the formation of β-amyloid plaques in the brain of a human, the method comprising:

a) providing a bispecific antibody comprising:

i) a first antibody binding specificity which confers the ability of the bispecific antibody to cross the blood-brain barrier; and

ii) a second antibody specificity conferring the ability of the bispecific antibody to bind to a β-amyloid epitope, the second antibody further conferring the ability to catalyze the cleavage of β-amyloid, thereby inhibiting the formation of β-

amyloid plaques by reducing levels of free β-amyloid available for incorporation; and

b) introducing the bispecific antibody of step a) into the circulatory system of the human at a concentration sufficient to result in transcytosis of the bispecific antibody across the blood brain barrier.

A1 cont.

62. The method of Claim 61 wherein the bispecific antibody is produced by fusing a first and a second hybridoma clone, the first hybridoma clone generating the specificity of step a) i) and the second hybridoma clone generating the specificity of step a) ii).

63. The method of Claim 61 wherein the bispecific antibody is produced by recombinant DNA techniques.

64. The method of Claim 61 wherein the first and second antibody binding specificities are provided by chemically linking a first antibody, or fragment thereof, to a second antibody, or fragment thereof.

65. The method of Claim 64 wherein the first and second antibodies are monoclonal antibodies.

66. The method of Claim 64 wherein the bispecific antibody is an $F(ab')_2$ hybrid.

67. The method of Claim 63 wherein the bispecific antibody is a single chain Fv heterobispecific dimer.

Add B1

In the Specification:

Please insert the attached Sequence Listing after page 60 of the specification, and renumber the Claims pages to begin with 64.